CLAIMS

1. A computer system for calculating latency of a network, comprising:

an active request generator that generates periodic requests to a node on the network;

an active request log that stores request timing information regarding the timing of the

periodic requests generated by the active request generator;

a response handler that receives responses from the node;

a response log that stores response timing information regarding the timing of the

responses received by the response handler; and

a latency curve generator that calculates a latency curve based upon the request timing

information and the response timing information.

2. The computer system of claim 1, wherein the periodic requests are directed to an

identified closed port at the node.

3. The computer system of claim 1, further comprising a request decay controller that

regulates a wait period between the periodic requests by the active request generator

based upon receipt of application packets associated with the node.

4. The computer system of claim 1, further comprising an active response filter that

identifies responses corresponding to the periodic requests by the active request generator

and directs other packets for further handling.

5. The computer system of claim 1, further comprising a node data manager that

identifies a plurality of nodes on the network and directs handling by the active request

generator, the response handler, and the latency curve generator for each of the plurality

of nodes.

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6. The computer system of claim 1, further comprising:

an outgoing latency calculator that calculates an outgoing latency of periodic requests by

the active request generator;

an incoming latency calculator that calculates an incoming latency of responses received

by the response handler; and

a continuous latency calculator that calculates the latency curve based upon the outgoing

latency and the incoming latency.

7. The computer system of claim 6, further comprising a self-queuing compensator that

adjusts the outgoing latency and the incoming latency for self-queuing.

8. The computer system of claim 6, further comprising a bandwidth calculator that

calculates an outgoing bandwidth used in calculating the outgoing latency and an

incoming bandwidth used in calculating the incoming latency.

9. The computer system of claim 6, further comprising a minimum latency calculator

that calculates a minimum latency used for calculating the latency curve.

10. A computer system for calculating latency of a network application comprising:

an active latency detection module that calculates latency data based upon periodic

requests to a network node that are denied by the network node;

a packet capture module that receives application data packets from the network node

related to the network application;

a trace data storage module that stores network application trace data based upon the

application data packets received by the packet capture module; and

a latency trace generation module that calculates latency of the network application based

upon the latency data calculated by the active latency detection module and the

network application trace data stored by the trace data storage module.

11. The computer system of claim 10, wherein the latency data includes a latency curve

calculated by the active latency detection module.

12. The computer system of claim 10, wherein the periodic requests by the active latency

detection module are directed to an identified closed port.

13. The computer system of claim 10, wherein the active latency detection module

decays a rate for the periodic requests based upon the receipt of application data packets

from the network node.

14. The computer system of claim 10, wherein the active latency detection module and

the packet capture module handle latency data and application data packets for a plurality

of network nodes.

15. The computer system of claim 10, further comprising a network packet trace

generation module that generates a network packet trace without latency correction based

upon the network application trace data.

16. The computer system of claim 10, further comprising a transaction generation module

that generates application requests to the network node and the application data packets

received by the packet capture module include application data packets responsive to the

application requests.

17. The computer system of claim 10, further comprising:

a report processing module for generating latency trace reports based upon latency trace

data generated by the latency trace generation module; and

a report viewer module for displaying latency trace reports to a user.

18. A method of calculating network latency comprising:

generating periodic requests to a network node, the periodic requests having low remote

processing times;

recording timing information for the periodic requests;

receiving responses corresponding to the periodic requests;

recording timing information for the received responses; and

calculating latency data for the network based upon the timing information for the

periodic requests and the timing information for the received responses.

19. The method of claim 18, wherein the periodic requests are directed to an identified

closed port at the network node.

20. The method of claim 18, wherein a delay between the periodic requests is based upon

a rate and further comprising decaying the rate based upon non-receipt of application data

packets from the network node.

21. The method of claim 18, further comprising:

receiving application data packets and responses corresponding to the periodic requests in

a data stream from the network node;

removing responses corresponding to the periodic requests; and

directing the application data packets for further processing.

22. The method of claim 18, further comprising correcting the latency data for self-queuing delays.

23. The method of claim 18, further comprising calculating a latency curve based upon the latency data.

24. The method of claim 18, further comprising:

receiving application data packets from the network node;

recording timing information for the application data packets; and

calculating a latency trace for an application associated with the application data packets based upon the timing information for the application data packets and the latency data.

25. A method of calculating network latency, comprising:

aggregating timing data from periodic requests to a network node;

calculating outgoing latencies for the periodic requests;

calculating incoming latencies for the periodic requests; and

generating a latency curve based upon the outgoing latencies and incoming latencies.

26. The method of claim 25, wherein calculation of outgoing latencies and calculation of incoming latencies includes compensation for self-queuing.

27. The method of claim 25, further comprising calculating a bandwidth for a host system, the bandwidth used in calculating the outgoing latencies and calculating the incoming latencies.

28. The method of claim 25, further comprising calculating a minimum latency for communications with the network node, the minimum latency used in calculating outgoing latencies and calculating incoming latencies.

29. The method of claim 25, further comprising:

aggregating timing data for application data packets directed to and from the network node; and

calculating a latency trace based upon the timing data for the application data packets and the latency curve.